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FIFTH PRELIMINARY REPORT ON THE AMERICAN
EXCAVATIONS AT SARDES IN ASIA MINOR

THE fifth season of the excavations at Sardes, the season of 1914, began in February as usual and continued for five months. The personnel of the excavating party remained unchanged, but for the addition to the staff of Professor George H. Chase of Harvard University, who came to Sardes for the express purpose of beginning his work on the pottery, and of Dr. T. Leslie Shear of Columbia University. Since the completion of the excavation of the Temple of Artemis the work in the immediate vicinity of that building has consisted almost entirely of enlarging the space about the temple with a view to revealing, so far as possible, the whole extent of the sacred precinct, and to pursuing the search for the Temple of Zeus mentioned in inscriptions, as described in last year's report,¹ and perhaps represented in architectural fragments that have been discovered which do not belong to the Temple of Artemis. Work was carried on during the past season on three sides of the precinct. On the south, where the deposit of earth is comparatively thin, the lines of the excavations were carried back almost to the ravine on that side, through a late Christian cemetery consisting chiefly of simple graves crudely lined and covered with flat stones or tiles, but having also a number of square vaulted tombs now in ruins. The most important discoveries made on this side were an early terrace wall of bowlders and a stratum of early pottery which helped us to determine the original slope of the ancient levels on that side. A long Lydian inscription, several Greek inscriptions used for lining the late graves, and many carved architectural details were found during the process of this work.

To the eastward of the temple, the high and hard masses of earth that have come down from the acropolis, as described in last year's report, still retarded the progress of excavations in that direction. Here the upper part, about thirty feet deep, which

¹ *A.J.A.* Vol. XVII, No 4, p. 471.

was comparatively soft, was cut back about fifty feet during the first two months, and the lower levels of extremely hard material were carried back about the same distance. On the north side the work of excavation was far easier, though the wall of earth to be cut away at its eastern end was very high. Here, on the intermediate level, the heavy Roman concrete wall with buttresses (Fig. 1), already referred to as blocking the rapid advance of

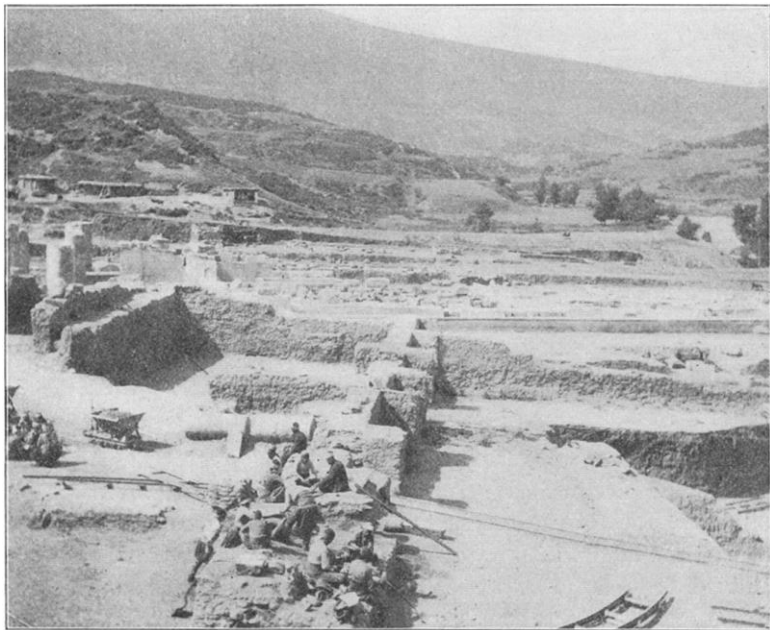


FIGURE 1.—CONCRETE WALLS ON NORTH SIDE OF EXCAVATIONS. VIEW FROM THE NORTH

excavation last year on the north side, continued toward the north, still impeding the work in its neighborhood. A deep and wide trench was excavated to the north of the lion group discovered last year, and quantities of pottery fragments were found throughout its entire volume, showing that the deepest deposits excavated on this side of the temple, and at this distance from it, are all later than the sixth century B.C. The digging on this side brought forth a number of Greek inscriptions, one of which refers to the priests of Zeus and is of importance in connection with the temple believed to be buried to the northeast of the Temple of

Artemis. A colossal sculptured face very well preserved, and fragments of another colossal head were found on the north side, in addition to architectural details of a scale much smaller than that of the temple, which probably belonged to small buildings in the northern part of the sacred precinct.

From time to time during the season attempts were made within the temple to investigate its substructure, with the result that foundations of an earlier temple in sandstone were found at a number of points at the west end of the fourth century cella. It will be possible from these ancient fragments that are still *in situ* to form some notion of the extent and form of the earlier structure. At the end of the first two months of digging, the costly and difficult task of excavating the high east face was temporarily abandoned, and a trench was dug in the bed of the ravine on the slope above the temple and at the extreme northern limit of the land covered by our concession. In this deep trench a line of railway was placed with a new outlet to the bed of the Pactolus, north of the village. It was our purpose to push the excavation in this trench toward the south to meet the temple excavations and, by so doing, to relieve the higher levels of the main excavations, and to hasten the clearing out of the space between the new excavations and the old, in which the Temple of Zeus must lie if it is within the same precinct as the Temple of Artemis, as the long inscription discovered in 1912 suggests. But the sinking of the new trench, besides beginning to accomplish the purpose for which it was intended, at once developed results that were far more important.

It is to be borne in mind that the main excavations, being in the direct course of the great landslide from the acropolis, which washed out deep gorges on either side of the temple and then filled them up again, had never revealed consecutive and undisturbed stratifications of ancient remains older than the Roman period. The new trench, on the other hand, being well up on the side of a shoulder of the acropolis, and in a space protected from the rush of the landslide, began from the first to show even and well defined strata, of pottery especially, which gave us our first firm basis of chronological sequence for the objects which had been found in the tombs and elsewhere during the previous four years. The ravine itself proved to be of very recent formation. Directly below its shallow bed of sand a solid deposit of slowly accumulated earth was found and, in the uppermost layers of

this, the walls of small buildings and other objects of the Roman period. Some of these walls were built upon foundations of older construction in connection with which wares of Hellenistic date were discovered. Not more than twenty feet below the surface we came upon well defined and consistent levels abounding in sherds and complete pots of Lydian ware which, by means of evidence discovered in the tombs, are known to date from the sixth and seventh centuries B.C. Many of these objects are of great beauty and interest; they were found in connection with the loose rubble foundations of houses built of mud bricks and now totally destroyed. In sinking the trench below this sixth-seventh century level, we came upon another well defined stratum of pottery resembling the early, sub-Mycenaean, wares of the Ionian coast, on a level about four feet below the other; and below this, at a depth of three feet or more, was a layer of sherds decorated in a variety of geometrical designs, and quantities of fragments in plain black and grey clays. This depth at present seems to represent the deepest stratum of remains of civilization on the slope of the acropolis at this point. These finds establish the great antiquity of Sardes as a centre of culture.

In extending the side of this new trench toward the south, we soon came upon a long, stout wall, lying east and west, parallel to the new trench itself, extending from one end of the new excavations to the other, *i.e.*, over 120 feet, and from six to twenty feet high (Fig. 2). The opposite end of the wall, which is unbroken by an opening of any kind, disappears in the deep unexcavated bank at the east end of the trench. It was assumed, as soon as the great length of this wall was apparent, that it must be either the north wall of the temple precinct or the rear wall of a long stoa bounding this side of the temple area. When the long wall had been found to terminate toward the west in an angle, and a west wall only forty feet long projecting toward the south had been turned, the accuracy of the second assumption was established. The front of this new building was reached at its extreme west end just at the time when the old excavations and the new trench met at this very point. But the season for digging was drawing to a close and there remained no time for a complete unearthing of the stoa. However, during the two remaining days of our stay, a small force of laborers was kept at work clearing out a narrow space at the west end of the building, and here, on the last day, were discovered the most important examples of

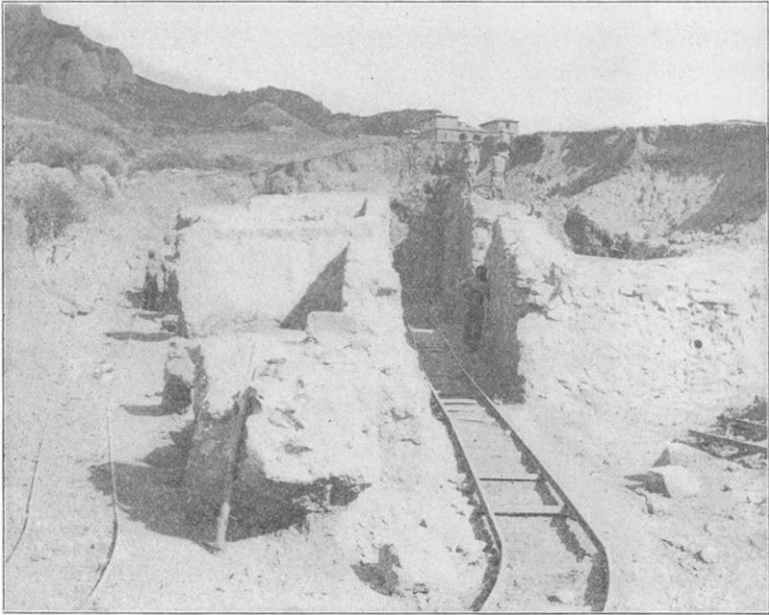


FIGURE 2.—NEW TRENCH ON NORTH SIDE OF EXCAVATIONS. VIEW FROM THE WEST



FIGURE 3.—HORSE'S HEAD FOUND AT SARDES

ancient sculpture that have yet come to light at Sardes. These finds consisted of the head and neck of a horse, three hands, and one foot, all near a statue-base which appears to be practically *in situ*. The horse's head (Fig. 3) is one of the finest specimens of ancient animal sculpture that have been found to date, and is interesting not only as a work of art, but as a study in anatomy. The hands and the foot are exquisitely wrought, the latter having a gilded sandal. It seems very likely that a few days more of

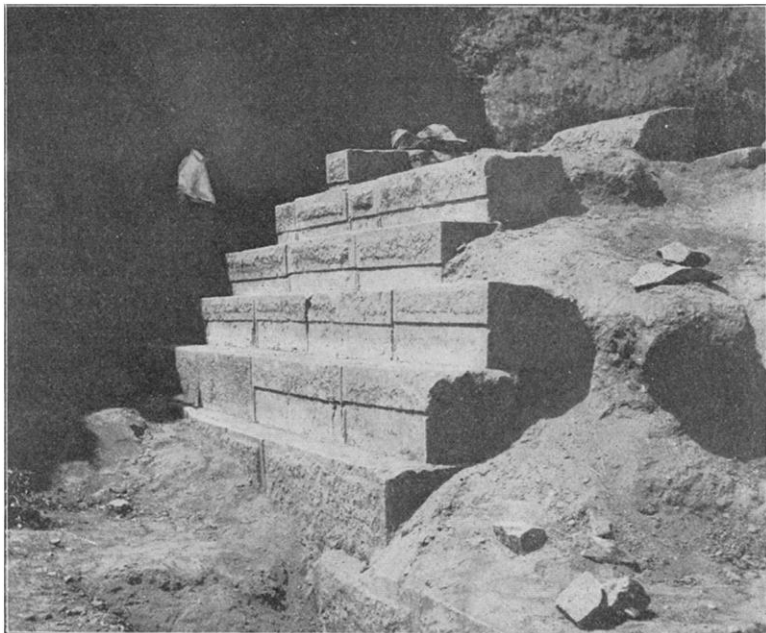


FIGURE 4.—STEPS OF PYRAMID TOMB

digging would have brought forth objects of even greater importance; for these fragments show that they have not been thrown about, or long exposed to misuse; for, though most delicately made, they have no scratches or breaks and must have been found not far from the spot where they originally belonged.

The excavations of tombs were carried on during the season, at first on the scene of our former operations on the west of the Pactolus, and later on the east side of the river, on the very slopes of the acropolis. In both places the usual number of beautiful and interesting objects were discovered, pottery,

bronze utensils, terra-cottas, figured glass, gold ornaments of great variety, and seals of the usual distinctive style. Of more particular interest, perhaps, are a gold necklace composed of long narrow units beautifully wrought and strung on two threads like a modern "dog-collar" necklace, and three small lions apparently carved in the round from nuggets of gold and set upon plaques to be sewn, or rivetted, on some article of dress. The lions, it may be interesting to note, have the exact pose of one of the marble lions discovered last year at the temple and illustrated in Figure 4 of last year's report.¹

An unusual discovery was made while we were excavating for tombs on the western slope of the acropolis. This is a pyramidal monument of seven steps (Fig. 4) on the steep northern slope of a ravine cutting into the acropolis hill. The upper part of the structure has been destroyed, but there are remains of the pavement of a chamber on the level of the seventh step. The building might be restored as a pyramid of about fourteen steps with an interior chamber, or as a cella crowning a seven-stepped base, like the well-known Persian monument, called the tomb of Cyrus, at Pasargadae. In order to place the monument on the slope of the wadi it was necessary to cut away a section of the hill to secure a level space, and in the face of this perpendicular cutting was excavated one of the ordinary chamber tombs with *dromos* and couches, but not on axis with the pyramidal monument itself. The steps of this structure are of limestone, a material not used, so far as we know, after the introduction of marble as a building material in Sardes. The blocks are rusticated, and the joints of the faces are cut in a unique manner, as may be seen in the photograph (Fig. 4). Toward the end of the season Dr. Shear established a camp on the far side of the river Hermus, in order to undertake the excavation of some of the famous tumuli, or "royal Lydian tombs" of Bin Tepé. Taking a tumulus in the neighborhood, excavated several years ago by the natives, as an example for guidance, digging was begun upon two of these tombs, one small and the other of medium size, *i.e.*, about 150 feet in diameter. The tumulus already excavated showed a well defined *dromos* lined with limestone, and several interior chambers, similarly lined with well dressed limestone, opening off from a central space. Though several weeks were spent cutting away the sides of these great artificial cones of

¹A.J.A. XVII, 1913, p. 475.

earth, and in driving trenches and tunnels into their interiors, neither a *dromos*, nor any indication of interior chambers was revealed in either of the tombs. This initial attempt on the part of the American expedition to excavate the ancient Lydian tumuli was rather disappointing; but neither Dr. Shear nor our Imperial Turkish Commissioner, A. Azziz Bey, who assisted him, believes that the attempt was in any way conclusive, and Dr. Shear hopes to resume the work upon these two tumuli and to begin on others during the next season of excavation.

The collection of pottery in our store-house, taken from the tombs and from the greater excavations, which had been growing during four years until it numbered over a thousand pieces, had been carefully catalogued by Mr. Bell, but had not been critically examined until this year when Professor Chase arrived to begin work on this part of our final publications. The paragraphs which follow are from his preliminary report.

"Most of the vases and fragments come from tombs, but some were found in the region of the temple. They cover a long period, roughly from the ninth century B.C. to the first century A.D. Speaking very generally, they fall into two large classes: (1) Early wares of the ninth to the fifth centuries B.C.; and (2) Hellenistic and later wares. During both these periods, Sardes was clearly an important centre for the manufacture of pottery. Most of the vases are local products; imported specimens are comparatively rare. There are some fragments of 'Rhodian' vases and other Ionic wares; two aryballi, an olpe, and a few fragments of Corinthian fabric; a 'Cyrenaic' cylix; some twenty Attic black-figured and red-figured vases, for the most part small and carelessly painted, together with a considerable number of examples of plain black Attic ware; and a few vases and fragments the provenience of which is uncertain. In regard to the products of the Hellenistic period, it is less easy to determine what specimens are imported and what are of local make, but even among these it seems probable that most were made in Sardes, or at least in Lydia. Of the earlier group, by far the greater number must be assigned to the seventh century and the first half of the sixth, that is, to the period of Lydian greatness, before the capture of Sardes by the Persians in 546 B.C. The dating depends upon the contents of three tombs, which, unlike most of the tombs that have been opened, apparently fell into ruin early and so were not re-used. In one was found one of the Corinthian

aryballi; in another, a large amphora decorated, over a poor white slip, with two animals crudely drawn in outline technique, so that it seems to be a local imitation of 'Rhodian' ware; and in the third were the 'Cyrenaic' cylix and the Corinthian olpe. These vases (and there is some other evidence which I expect to present in detail at a later time) fix the date of the tombs as the seventh century or the early years of the sixth. Taking these three tombs as a basis, a large group of vases can be distinguished which may be called Lydian. Their characteristics may be stated as follows:

"The clay is usually well purified, ranging in color from light buff to red; it usually contains many small particles of mica, such



FIGURE 5.—SCYPHUS (HEIGHT 15.3 CM.)

as have been observed in other clays from Asia Minor. The vases are all wheel-made, and give evidence of careful workmanship. The forms in many cases resemble Greek forms, but show little of that fine sense of proportion upon which so much of the charm of Greek vases depends. The Lydian potters evidently had a liking for a tall foot in the shape of a truncated cone, which certainly cannot be called an element of beauty (cf. Figs. 5, 6, 8). The favorite forms are: amphorae, scyphi (Fig. 5), oenochorae with trefoil mouths, tall stands without handles (Fig. 7), flat plates, concave-sided lecythi (Fig. 8), and small, broad-mouthed vases of the shape that has sometimes, without much justification, been called 'krateriskos' (Fig. 6).

"For the decoration of these vases the Lydian potters employed a variety of methods. The commonest is what we came to call

'streaked technique,' the application of a lustrous varnish in such a way that, although the whole surface to be decorated is covered, the effect is streaked and uneven, and as a result of firing the color ranges all the way from black to brown and red.¹ The general effect is that of the varnish of late Mycenaean vases, and perhaps we should see here an influence of that 'degenerate Mycenaean style' which is believed to have flourished on the coast of Asia Minor long after the downfall of the Mycenaean civilization on the mainland of Greece. But in Lydia, this method of applying the varnish became traditional; the streaked technique is the most prominent characteristic of the Lydian ware. Sometimes it was used to cover the whole surface of the vase, sometimes for broad bands about the body, with simple patterns (groups of brush-strokes, S-ornaments, etc.) on the shoulder, and a waved band on the neck. Very often it served as a basis for linear decoration applied in lustreless white (more rarely, in lustreless red), in the form of bands or groups of bands (cf. Fig. 5) or rows of small dots. In other cases, the varnish, thinly applied so that it burned red, was used as a basis for linear decoration in dull, lustreless black.

"Another method of decoration much favored by the Lydian potters is the use of a white slip. The quality of this slip varies,



FIGURE 6.—"KRATERISKOS"
(HEIGHT 11.4 CM.)



FIGURE 7.—STAND (HEIGHT 13.8 CM.)

¹ The vase represented in Figure 5 is painted in this manner, except a spared band on the level of the handles. In the "krateriskos" (Fig. 6), the neck, the lower part of the body, and the foot are painted in the streaked technique; in the stand (Fig. 7), the foot; and in the lecythus (Fig. 8), the neck and the foot.

but in the best specimens it is remarkably fine and hard. Over the slip, a favorite decoration consists of bands and simple patterns in the usual black-brown-red varnish (cf. Fig. 7 and the upper part of the body of the 'krateriskos,' Fig. 6). But its most noteworthy use is as a basis for 'marbling' with the ordinary varnish (cf. Fig. 8), in a way which suggests an imitation of work in glass. Fragments exhibiting such a decoration have been found elsewhere, but they are so much more numerous at Sardes that this technique may reasonably be regarded as a Lydian invention. The great use of the white slip at Sardes, also, combined with its excellence, raises an interesting question as to the relation of the Sardian fabrics to the Greek wares of the Ionic group. May not the Greek potters of the coast cities have learned a lesson here from their Lydian contemporaries?

"The history of the potter's art at Sardes from the overthrow of Croesus in 546 B.C. to the conquest by Alexander in 334 B.C. presents an interesting problem. The vases which can be assigned to this period of Persian domination are comparatively few and consist principally of imported Attic wares. A few groups of native vases assignable to the end of the sixth century or the beginning of the fifth show a persistence of the older forms and methods of decoration, with some decline in technical skill. These facts, taken together, suggest that the Sardian potteries, like those of other cities within the range of the commercial activities of Athens, found it impossible to compete with the finer products of the workshops in the Ceramicus and suffered a temporary eclipse. But it must be admitted that the evidence for this period is unsatisfactory. Most of the tombs, as has already been noted, were re-used, some of them, apparently, several times, and in the successive clearings, many vases were removed and lost. The entrance passages and the slope of the tomb hill are strewn with fragments which show only too clearly the method of procedure. It is to be hoped that later campaigns will gradually fill this gap in our knowledge. At present we can only record the fact that for the two centuries of Persian occu-

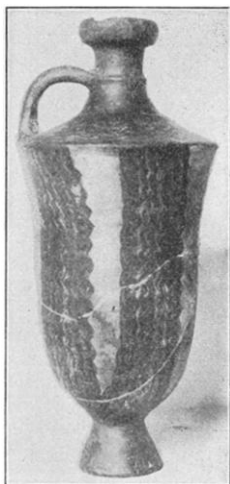


FIGURE 8.—LECYTHUS
(HEIGHT 21.9 CM.)

pation evidence is scanty, but such as we have suggests a decline of the Sardian potteries.

"For the period after Alexander, however, there is no lack of evidence. Most of the more prominent classes of Hellenistic wares are represented at Sardes: black-varnished vases decorated with garlands and other patterns in white and yellow and applied lumps of clay, of the type which has recently been called 'West Slope ware' from the examples found on the west slope of the Athenian Acropolis; moulded bowls of the 'Megarian' type; plain red wares, often with potters' stamps; 'lagynoi' with decoration in thinned varnish over a yellowish-white slip, together with a few examples with similar decoration but less usual shapes; and alabastra covered with a flaky white slip over which bright reds and blues and yellows are used to suggest a fillet tied around the body of the vase and for wedge-shaped patterns on the lip. All these wares have been found over a wide area and probably were made in many different places. That most of the Sardian examples were made in Sardes, or at least in Lydia, is suggested by the clays, which resemble those used for earlier vases of local make, and by other facts, such as the discovery of fragments of moulds and the occurrence of the unusual genitive ending *ήους* in potters' signatures (*Μιθρήους*, *Ελατροκλήους*).

"In conclusion, something should be said of the fragments of early vases which were found some distance north of the temple in the campaign of 1914. Here, at the first point where early levels with definite stratification have been found, considerable deposits of fragments and some complete small vases came to light below the level of the ordinary seventh century types. In the lowest layers (*ca.* 7 feet below the seventh century level), along with fragments of ordinary unpainted pots in grey-to-black clay, such as are everywhere associated with the Lydian wares, were fragments of buff-to-red clay covered with a thin red-to-brown varnish over which were painted geometric patterns in dull black. A few fragments also had a poor, gritty, yellow-white slip applied in bands as a basis for the geometric decoration. The vases, so far as their forms could be determined, were large storage vases, pitchers, flat plates, and stands. In another deposit, about 40 centimetres above the bottom level, the fragments showed a continuance of pottery of this type, with an increasing use of the yellow-white slip as a basis for decoration. Finally, at a level some 60 centimetres above the bottom, along

with a few fragments of this earlier type, were found many fragments on which geometric patterns were painted in more or less lustrous black-to-red varnish directly on the clay or on a yellow-white slip of fairly good quality. Most of these fragments came from scyphi and some of them were painted on the interior in the streaked technique. Here, then, we have clearly some of the steps in the development of the typical Lydian ware. I am inclined to assign these layers to the ninth and the eighth centuries B.C., but such a dating, based on one series of levels, can be only tentative. For more definite results we must await the evidence of future campaigns."

HOWARD CROSBY BUTLER.

PRINCETON UNIVERSITY,
October 5, 1914.